
APPENDIX C

REQUIRED PIPELINE IMPROVEMENTS

Required Pipeline Improvements

Proj No.	Up- stream MH ID	Down- stream MH ID	Length (ft.)	Exist Size	Prop'd Size	Ex. Mat'l	Avg Depth (ft.)	Location	Condition	Unit Cost	Pipe/Emb/Exc/Bkfl	MH's	Surface	Exc/Bkfill Add'l Depth	Rock	Total Added \$	Total Added \$	City District	Aerial Area	Comment	Esmt length (ft.)	Esmt area w/ 25 ft	ROW area w/ 25 ft
											Extended Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost / LF	Extended Cost						
R1	14K052	14K057	6	12	15	DIP	19.66	ROW	clear/asph	95.00	522.50	3000.00	40.00	22.00	11.00	73.00	\$ 401.50	south 60	LR ne				
R1	14K058	14K052	165	12	15	DIP	15.55	ROW	Clear/asph	95.00	15,713.00	3000.00	40.00	14.00	11.00	65.00	\$ 10,751.00	south 60	LR ne				
R1	14K059	14K058	338	12	15	DIP	11.25	CK X-ING	asph	95.00	32,110.00	3000.00	200.00	14.00	11.00	225.00	\$ 76,050.00	south 60	LR ne				
			509								\$ 48,345.50	\$ 9,000.00					\$ 87,202.50						
R1	14L001	14L025	71	12	15	NRCP	5.38	ROW	wooded	95.00	6,707.00	3000.00	40.00	0.00		40.00	\$ 2,824.00	south 60	LR ne				
R1	14L002	14L026	324	12	15	NRCP	10.69	ROW	clear	95.00	30,770.50	3000.00		6.00	11.00	17.00	\$ 5,506.30	south 60	LR ne				
R1	14L003	14L002	398	12	15	NRCP	13.80	Rdwy	asph	95.00	37,772.00	3000.00	70.00	14.00	11.00	95.00	\$ 37,772.00	south 60	LR ne				
R1	14L004	14L003	404	12	15	NRCP	11.89	Rdwy	asph	95.00	38,332.50	3000.00	55.00	6.00	11.00	72.00	\$ 29,052.00	south 60	LR ne				
R1	14L005	14L024	130	12	15	NRCP	10.02	Rdwy	asph	95.00	12,321.50	3000.00	55.00	6.00	11.00	72.00	\$ 9,338.40	south 60	LR ne				
R1	14L024	14L004	146	12	15	NRCP	10.79	Rdwy	asph	95.00	13,832.00	3000.00	55.00	6.00	11.00	72.00	\$ 10,483.20	south 60	LR ne				
R1	14L025	14K059	65	12	15	NRCP	7.98	ROW	wooded	95.00	6,203.50	3000.00	40.00	0.00		40.00	\$ 2,612.00	south 60	LR ne				
R1	14L026	14L001	221	12	15	UNKN	5.99	ROW	wooded	95.00	20,985.50	3000.00	40.00	0.00		40.00	\$ 8,836.00	south 60	LR ne				
			1,757								\$ 166,924.50	\$ 24,000.00					\$ 106,423.90						
Total Raw Construction Cost Project R 1																	\$441,896						
R2	2O024	River_nd	87	42	42	RCP	9.16	CK X-ING	river crossing	220.00	19,118.00	10000.00	400.00	0.00	22.00	422.00	\$ 36,671.80	south 60	LR nw	esmt	87	2172.5	
R2	River_nd	2O001	84	42	42	RCP	8.38	CK X-ING	river crossing	220.00	18,546.00	10000.00	400.00	0.00	22.00	422.00	\$ 35,574.60	south 60	LR nw	esmt	84	2107.5	
			171								\$ 37,664.00	\$ 20,000.00					\$ 72,246.40						
Total Raw Construction Cost Project R 2																	\$129,910						
R3	3L078	3L080	30	42	60	NRCP	15.65	ROW	clear	300.00	9,000.00	10000.00		70.00	26.00	96.00	\$ 2,880.00	south 60	LR nw	esmt	30	750	
			30								\$ 9,000.00	\$ 10,000.00					\$ 2,880.00						
Total Raw Construction Cost Project R 3																	\$21,880						
R4	2F108	2F150	140	10	15	NRCP	7.60	creek bank	wooded	95.00	13,262.00	3000.00	120.00	0.00		120.00	\$ 16,752.00	south 60	LR sw	esmt	140	3490	
R4	2F149	2F148	347	12	15	DIP	5.35	creek bank	wooded	95.00	32,974.50	3000.00	120.00	0.00		120.00	\$ 41,652.00	south 60	LR sw	esmt	347	8677.5	
R4	2F150	2F149	340	12	15	DIP	5.22	creek bank	wooded	95.00	32,338.00	3000.00	120.00	0.00		120.00	\$ 40,848.00	south 60	LR sw	esmt	340	8510	
			827								\$ 78,574.50	\$ 9,000.00					\$ 99,252.00						
Total Raw Construction Cost Project R 4																	\$186,827						
R5	1E054	1E055	207	8	10	DIP	5.64	Res Back yard	crk x-ing & landscaped	85.00	17,603.50	3000.00	140.00	0.00		140.00	\$ 28,994.00	south 60	LR sw	esmt	207	5177.5	
R5	1E055	1E056	98	8	10	DIP	4.68	Res Back yard	landscaped	85.00	8,355.50	3000.00	80.00	0.00		80.00	\$ 7,864.00	south 60	LR sw	esmt	98	2457.5	
R5	1E056	1E057	150	8	10	PVC	5.11	Res Back yard	landscaped	85.00	12,733.00	3000.00	80.00	0.00		80.00	\$ 11,984.00	south 60	LR sw	esmt	150	3745	
			455								\$ 38,692.00	\$ 9,000.00					\$ 48,842.00						
Total Raw Construction Cost Project R 5																	\$96,534						
R6	0G025	0G043	325	8	10	NRCP	6.83	Esmt Comm'l Yard	Clear	85.00	27,591.00	3000.00	0.00	0.00		0.00	\$ -	south 60	Pinnacle Mtn se	esmt	325	8115	
R6	0G040	0G046	170	8	12	NRCP	6.52	Rdwy	asph	90.00	15,336.00	3000.00	40.00	0.00		40.00	\$ 6,816.00	south 60	Pinnacle Mtn se				
R6	0G041	0G040	185	8	12	NRCP	6.72	Rdwy	asph	90.00	16,614.00	3000.00	40.00	0.00		40.00	\$ 7,384.00	south 60	Pinnacle Mtn se				
R6	0G042	0G041	293	8	10	NRCP	6.37	Rdwy	asph	85.00	24,939.00	3000.00	40.00	0.00		40.00	\$ 11,736.00	south 60	Pinnacle Mtn se				
R6	0G043	0G042	72	8	10	NRCP	7.56	Rdwy	asph	85.00	6,120.00	3000.00	40.00	0.00		40.00	\$ 2,880.00	south 60	Pinnacle Mtn se				
R6	0G046	0G047	96	8	12	NRCP	5.25	Rdwy	asph	90.00	8,613.00	3000.00	40.00	0.00		40.00	\$ 3,828.00	south 60	Pinnacle Mtn se				
R6	0G047	0G080	177	8	12	NRCP	5.08	Rdwy	asph	90.00	15,966.00	3000.00	40.00	0.00		40.00	\$ 7,096.00	south 60	Pinnacle Mtn se				
R6	0G080	0G079	279	10	12	NRCP	4.90	Rdwy	asph	90.00	25,101.00	3000.00	40.00	0.00		40.00	\$ 11,156.00	south 60	Pinnacle Mtn se				
			1,597								\$ 140,280.00	\$ 24,000.00					\$ 50,896.00						
Total Raw Construction Cost Project R 6																	\$215,176						

Required Pipeline Improvements

Proj No.	Up- stream MH ID	Down- stream MH ID	Length (ft.)	Exist Size	Prop'd Size	Ex. Mat'l	Avg Depth (ft.)	Location	Condition	Unit Cost	Pipe/Emb/Exc/Bkfl	MH's	Surface	Exc/Bkfill Add'l Depth	Rock	Total Added \$	Total Added \$	City District	Aerial Area	Comment	Esmt length (ft.)	Esmt area w/ 25 ft	ROW area w/ 25 ft
											Extended Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost / LF	Extended Cost						
R12	6G010	6G098	36	10	12	PVC	5.33	Rdwy	asph	90.00	3,249.00	3000.00	40.00	0.00		40.00	\$ 1,444.00	north 60	LR sw				
R12	6G011	6G106	198	10	12	DIP	3.60	Golf course	fairway	90.00	17,793.00	3000.00	40.00	0.00		40.00	\$ 7,908.00	north 60	LR sw	esmt	198	4942.5	
R12	6G012	6G010	29	10	12	PVC	4.14	Rdwy	asph	90.00	2,610.00	3000.00	40.00	0.00		40.00	\$ 1,160.00	north 60	LR sw				
R12	6G098	6G112	285	10	12	PVC	4.09	Roadway/ parking/ GC	green	90.00	25,686.00	3000.00	100.00	0.00		100.00	\$ 28,540.00	north 60	LR sw	esmt	285	7135	
R12	6G108	6G011	245	10	12	PVC	3.13	Golf course	fairway	90.00	22,041.00	3000.00	40.00	0.00		40.00	\$ 9,796.00	north 60	LR sw	esmt	245	6122.5	
R12	6G112	6G108	35	10	12	PVC	2.50	Golf course	fairway	90.00	3,177.00	3000.00	40.00	0.00		40.00	\$ 1,412.00	north 60	LR sw	esmt	35	882.5	
			828								\$ 74,556.00	\$ 18,000.00					\$ 50,260.00						
Total Raw Construction Cost Project R 12																	\$142,816						
R13	11H104	11H103	368	15	18	NRCP	12.64	park	open	105.00	38,598.00	5000.00		14.00	15.00	29.00	\$ 10,660.40	riverfront	LR ne	esmt	368	9190	
R13	11H107	11H104	117	15	18	NRCP	15.44	park	open	105.00	12,253.50	5000.00		14.00	15.00	29.00	\$ 3,384.30	riverfront	LR ne	esmt	117	2917.5	
R13	11H109	11H168	153	15	18	NRCP	15.14	school yard	wooded	105.00	16,023.00	5000.00		14.00	15.00	29.00	\$ 4,425.40	riverfront	LR ne	esmt	153	3815	
R13	11H111	11H109	143	15	18	NRCP	15.34	school yard	Parking lot	105.00	15,036.00	5000.00	70.00	14.00	15.00	99.00	\$ 14,176.80	riverfront	LR ne	esmt	143	3580	
R13	11H146	11H111	374	15	18	NRCP	16.19	Rdwy	asph	105.00	39,280.50	5000.00	70.00	22.00	15.00	107.00	\$ 40,028.70	riverfront	LR ne				
R13	11H148	11H146	354	15	18	NRCP	17.65	Rdwy	asph	105.00	37,138.50	5000.00	70.00	22.00	15.00	107.00	\$ 37,845.90	riverfront	LR ne				
R13	11H168	11H107	66	15	18	NRCP	14.99	Rdwy	asph	105.00	6,930.00	5000.00	70.00	14.00	15.00	99.00	\$ 6,534.00	riverfront	LR ne				
			1,574								\$ 165,259.50	\$ 35,000.00					\$ 117,055.50						
R13	11I001	11H148	50	15	18	NRCP	18.01	Rdwy	asph	105.00	5,197.50	5000.00	70.00	22.00	15.00	107.00	\$ 5,296.50	riverfront	LR ne				
R13	11I002	11I001	357	15	18	NRCP	15.49	esmt res bk yard	wooded	105.00	37,527.00	5000.00	70.00	14.00	15.00	99.00	\$ 35,382.60	riverfront	LR ne	esmt	357	8935	
R13	11I018	11I002	331	15	18	NRCP	11.57	esmt comm'l/res yrd	wooded w/ rdwy	105.00	34,744.50	5000.00	70.00	14.00	15.00	99.00	\$ 32,759.10	riverfront	LR ne	esmt	331	8272.5	
			738								\$ 77,469.00	\$ 15,000.00					\$ 73,438.20						
Total Raw Construction Cost Project R 13																	\$483,222						
R14	10I006	10I004	358	12	15	VCP	12.83	Alley	asph	95.00	34,038.50	3000.00	55.00	16.00	11.00	82.00	\$ 29,380.60	riverfront	LR ne				
R14	10I007	10I006	176	12	15	VCP	13.89	Rdwy	asph	95.00	16,720.00	3000.00	55.00	16.00	11.00	82.00	\$ 14,432.00	riverfront	LR ne				
R14	10I008	10I007	350	12	15	VCP	14.00	Rdwy	asph	95.00	33,221.50	3000.00	55.00	16.00	11.00	82.00	\$ 28,675.40	riverfront	LR ne				
R14	10I009	10I008	60	12	15	UNKN	10.67	Rdwy	asph	95.00	5,681.00	3000.00	55.00	6.00	11.00	72.00	\$ 4,305.60	riverfront	LR ne				
			944								\$ 89,661.00	\$ 12,000.00					\$ 76,793.60						
Total Raw Construction Cost Project R 14																	\$178,455						
R15	10I012	10I112	166	12	15	VCP	10.01	Rdwy	asph	95.00	15,789.00	3000.00	55.00	6.00	11.00	72.00	\$ 11,966.40	riverfront	LR ne				
R15	10I022	10I012	14	12	15	VCP	5.50	Rdwy	asph	95.00	1,292.00	3000.00	40.00	0.00		40.00	\$ 544.00	riverfront	LR ne				
R15	10I023	10I022	366	10	15	VCP	5.44	Rdwy	asph	95.00	34,722.50	3000.00	40.00	0.00		40.00	\$ 14,620.00	riverfront	LR ne				
R15	10I112	10I010	266	12	15	VCP	13.25	Parking Lot	asph	95.00	25,232.00	3000.00	55.00	6.00	11.00	72.00	\$ 19,123.20	riverfront	LR ne				
			811								\$ 77,035.50	\$ 12,000.00					\$ 46,253.60						
Total Raw Construction Cost Project R 15																	\$135,289						
R16	9F024	9F059	90	27	30	NRCP	15.98	Parking Lot	asph	175.00	15,767.50	7000.00	70.00		19.00	89.00	\$ 8,018.90	riverfront	NLR se	esmt	90	2252.5	
R16	9F025	9F024	132	27	30	NRCP	16.58	Parking Lot	asph	175.00	23,030.00	7000.00	70.00		19.00	89.00	\$ 11,712.40	riverfront	NLR se	esmt	132	3290	
R16	9F026	9F025	427	27	30	NRCP	12.65	rdwy	asph	175.00	74,690.00	7000.00	55.00		19.00	74.00	\$ 31,583.20	riverfront	NLR se	esmt	427	10670	
R16	9F028	9F026	376	27	30	NRCP	7.60	rdwy	asph	175.00	65,817.50	7000.00	40.00	0.00		40.00	\$ 15,044.00	riverfront	NLR se	esmt	376	9402.5	
R16	9F029	9F028	381	24	30	NRCP	6.60	rdwy	asph	175.00	66,692.50	7000.00	40.00	0.00		40.00	\$ 15,244.00	riverfront	NLR se	esmt	381	9527.5	
R16	9F030	9F029	143	24	30	NRCP	9.89	rr ROW xing	clear	175.00	24,972.50	7000.00	200.00		19.00	219.00	\$ 31,251.30	riverfront	NLR se	esmt	143	3567.5	
R16	9F059	9F023	213	27	30	NRCP	14.02	Parking Lot	asph	175.00	37,257.50	7000.00	70.00		19.00	89.00	\$ 18,948.10	riverfront	NLR se	esmt	213	5322.5	
			1,761								\$ 308,227.50	\$ 49,000.00					\$ 131,801.90						
Total Raw Construction Cost Project R 16																	\$489,029						

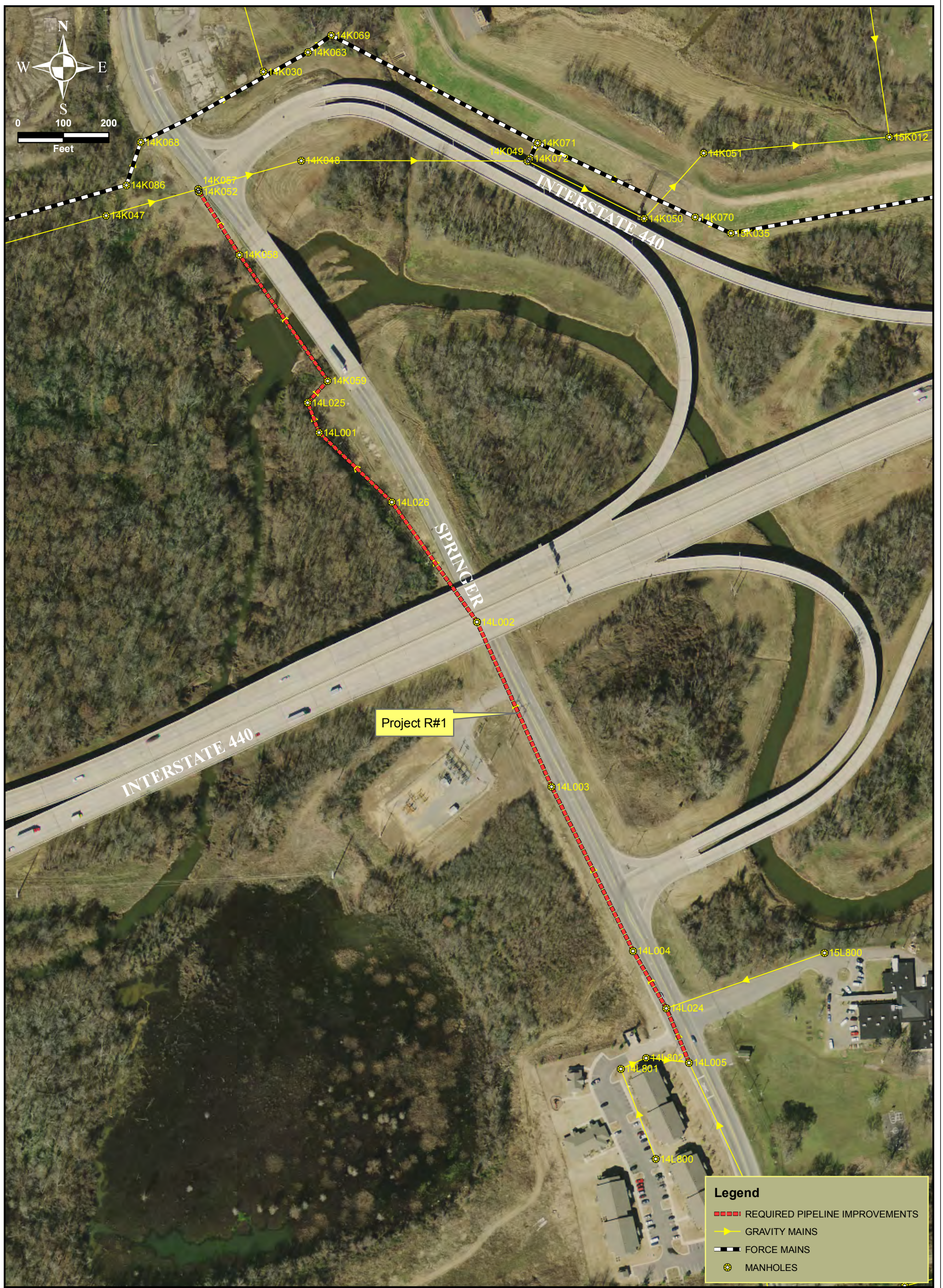
Required Pipeline Improvements

Proj No.	Up- stream MH ID	Down- stream MH ID	Length (ft.)	Exist Size	Prop'd Size	Ex. Mat'l	Avg Depth (ft.)	Location	Condition	Unit Cost	Pipe/Emb/Exc/Bkfl	MH's	Surface	Exc/Bkfill Add'l Depth	Rock	Total Added \$	Total Added \$	City District	Aerial Area	Comment	Esmt length (ft.)	Esmt area w/ 25 ft	ROW area w/ 25 ft	
											Extended Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost / LF	Extended Cost							
R17	8E050	8E103	167	18	24	NRCP	4.90	Rdwy/Parking lot	conc & asph	145.00	24,157.00	5000.00	40.00	0.00		40.00	\$ 6,664.00	riverfront	NLR se	esmt	167	4165		
R17	8E051	8E050	287	18	24	NRCP	7.35	rdwy	conc	145.00	41,658.50	5000.00	40.00	0.00		40.00	\$ 11,492.00	riverfront	NLR se					
R17	8E052	8E051	76	18	24	NRCP	8.57	Rdwy/Parking lot	asph & conc	145.00	11,078.00	5000.00	40.00	0.00	15.00	55.00	\$ 4,202.00	riverfront	NLR se					
R17	8E103	8E049	185	18	24	NRCP	6.73	Parking Lot	asph & landscape	145.00	26,796.00	5000.00	40.00	0.00		40.00	\$ 7,392.00	riverfront	NLR se	esmt	185	4620		
715											\$ 103,689.50	\$ 20,000.00					\$ 29,750.00							
Total Raw Construction Cost Project R 17																	\$153,440							
R18	8E010	8E091	58	15	18	DIP	11.68	Rdwy	wooded & asph	105.00	6,037.50	5000.00	55.00	6.00	15.00	76.00	\$ 4,370.00	riverfront	NLR se-sw					
R18	8E092	8E010	186	15	18	DIP	8.95	rdwy	asph	105.00	19,561.50	5000.00	40.00	0.00	15.00	55.00	\$ 10,246.50	riverfront	NLR se-sw					
R18	8E093	8E092	29	15	18	RCP	4.69	rdwy	asph	105.00	3,076.50	5000.00	40.00	0.00		40.00	\$ 1,172.00	riverfront	NLR se-sw					
R18	8E094	8E093	169	15	18	DIP	6.38	res yard	landscaped	105.00	17,703.00	5000.00	20.00	0.00		20.00	\$ 3,372.00	riverfront	NLR se-sw	esmt	169	4215		
R18	8E095	8E094	108	15	18	DIP	6.74	res crkbank & rdwy	wooded & asph	105.00	11,371.50	5000.00	150.00	0.00		150.00	\$ 16,245.00	riverfront	NLR se-sw	esmt	108	2707.5		
550											\$ 57,750.00	\$ 25,000.00					\$ 35,405.50							
Total Raw Construction Cost Project R 18																	\$118,156							
R19	6E143	7E055	344	10	12	CAST	4.20	hi-end res backyard	wooded/landc ape/crkbed	90.00	30,969.00	3000.00	120.00	0.00		120.00	\$ 41,292.00	riverfront		esmt	344	8602.5		
R19	6E144	6E143	195	10	12	CAST	4.18	hi-end res backyard	wooded/landc ape/crkbed	90.00	17,505.00	3000.00	120.00	0.00		120.00	\$ 23,340.00	riverfront		esmt	195	4862.5		
R19	6E155	6E144	54	10	12	CAST	3.81	hi-end res backyard	wooded/landc ape/crkbed	90.00	4,860.00	3000.00	120.00	0.00		120.00	\$ 6,480.00	riverfront		esmt	54	1350		
R19	6E156	6E155	105	10	12	DIP	4.05	hi-end res backyard	wooded/landc ape/crkbed	90.00	9,468.00	3000.00	120.00	0.00		120.00	\$ 12,624.00	riverfront		esmt	105	2630		
698											\$ 62,802.00	\$ 12,000.00					\$ 83,736.00							
R19	6D065	6D094	84	8	12	DIP	4.77	hi-end res backyard	wooded/landc ape/crkbed	90.00	7,524.00	3000.00	120.00	0.00		120.00	\$ 10,032.00	riverfront		esmt	84	2090		
R19	6D073	6D092	140	8	12	VCP	4.97	hi-end res backyard	wooded/landc ape/crkbed	90.00	12,618.00	3000.00	120.00	0.00		120.00	\$ 16,824.00	riverfront		esmt	140	3505		
R19	6D074	6E156	209	8	12	DIP	3.96	hi-end res bkyrd & rdwy	wooded/landsc pe/crkbed/asph	90.00	18,837.00	3000.00	120.00	0.00		120.00	\$ 25,116.00	riverfront		esmt	209	5232.5		
R19	6D092	6D074	99	8	12	CIPR	3.18	hi-end res backyard	wooded/landc ape/crkbed	90.00	8,937.00	3000.00	120.00	0.00		120.00	\$ 11,916.00	riverfront		esmt	99	2482.5		
R19	6D094	6D095	81	8	12	DIP	5.48	hi-end res backyard	wooded/landc ape/crkbed	90.00	7,281.00	3000.00	120.00	0.00		120.00	\$ 9,708.00	riverfront		esmt	81	2022.5		
R19	6D095	6D073	153	8	12	CIPR	5.67	hi-end res backyard	wooded/landc ape/crkbed	90.00	13,806.00	3000.00	120.00	0.00		120.00	\$ 18,408.00	riverfront		esmt	153	3835		
767											\$ 69,003.00	\$ 18,000.00					\$ 92,004.00							
Total Raw Construction Cost Project R 19																	\$337,545							
R20	11G096	11G119	19	12	15	DIP	5.1	rdwy	asph	95.00	\$ 1,805.00	3000.00	40.00	0.00		40.00	\$ 760.00							
19											\$ 1,805.00	\$ 3,000.00					\$ 760.00							
Total Raw Construction Cost Project R 20																	\$5,565							
R21	3K059	OldFaithful_Xcc	11		18		8.0	park	clear	105.00	\$ 1,155.00	5000.00	0.00	0.00	15.00	15.00	\$ 165.00							
11											\$ 1,155.00	\$ 5,000.00					\$ 165.00							
Total Raw Construction Cost Project R 21																	\$6,320							
R22	RCOut1	RCOut2	5,548		42		20.5	park/creek	creek/wooded	220.00	\$ 1,220,560.00	110000.00	40.00	90.00	286.00	416.00	\$ 2,307,968.00			ROW	5,548		138700	
R22	RCOut2	ND-1	4,781		48		22.8	park/creek	creek/wooded	235.00	\$ 1,123,535.00	90000.00	40.00	100.00	330.00	470.00	\$ 2,247,070.00			ROW	4,781		119525	
10,329											\$ 2,344,095.00	\$ 200,000.00					\$ 4,555,038.00							
Total Raw Construction Cost Project R 22																	\$7,099,133							

Required Pipeline Improvements

Proj No.	Up- stream MH ID	Down- stream MH ID	Length (ft.)	Exist Size	Prop'd Size	Ex. Mat'l	Avg Depth (ft.)	Location	Condition	Unit Cost	Pipe/Emb/Exc/Bkfl	MH's	Surface	Exc/Bkfill Add'l Depth	Rock	Total Added \$	Total Added \$	City District	Aerial Area	Comment	Esmt length (ft.)	Esmt area w/ 25 ft	ROW area w/ 25 ft
											Extended Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost / LF	Extended Cost						
R23	4L015	5L030	1,500		42					300.00	450,000.00	10000.00	120.00	70.00	26.00	216.00	\$ 324,000.00						
			1,500								\$ 450,000.00	\$ 10,000.00					\$ 324,000.00						
Total Raw Construction Cost Project R 23																	\$784,000						
R24	3I039	3I042	862		30		14.7	creek bed	creek	175.00	\$ 150,850.00	28000.00	40.00	40.00	133.00	213.00	\$ 183,606.00	new line		ROW	862		21550
			862								\$ 150,850.00	\$ 28,000.00					\$ 183,606.00						
Total Raw Construction Cost Project R 24																	\$362,456						
R25	2G002	2H027	149	15	18	RCP	13.1	rdwy	asph	105.00	\$ 15,645.00	5000.00	70.00	14.00	15.00	99.00	\$ 14,751.00						
			149								\$ 15,645.00	\$ 5,000.00					\$ 14,751.00						
Total Raw Construction Cost Project R 25																	\$35,396						
R26	2G044	2G039	294	15	18	VCP	11.5	park	wooded/clear	105.00	\$ 30,870.00	5000.00	20.00	6.00	15.00	41.00	\$ 12,054.00			esmt	294		7350
R26	2G045	2G044	174	15	18	VCP	13.6	park	clear	105.00	\$ 18,270.00	5000.00	0.00	14.00	15.00	29.00	\$ 5,046.00			esmt	174		4350
R26	2G046	2G045	87	15	18	VCP	13.3	rdwy	asph	105.00	\$ 9,135.00	5000.00	70.00	14.00	15.00	99.00	\$ 8,613.00						
			555								\$ 58,275.00	\$ 15,000.00					\$ 25,713.00						
Total Raw Construction Cost Project R 26																	\$98,988						
R27	0E078	0E168	272	24	30	NRCP	11.1	res back yrd	clear	175.00	\$ 47,600.00	7000.00	0.00	20.00	19.00	39.00	\$ 10,608.00			esmt	272		6800
R27	0E079	0E078	341	24	30	RCP	9.8	res back yrd	wooded	175.00	\$ 59,675.00	7000.00	40.00	20.00	19.00	79.00	\$ 26,939.00			esmt	341		8525
R27	0E080	0E079	318	24	30	RCP	9.4	res back yrd	wooded	175.00	\$ 55,650.00	7000.00	40.00	20.00	19.00	79.00	\$ 25,122.00			esmt	318		7950
R27	0E168	0E169	177	24	30	DIP	14.2	res back yrd	clear	175.00	\$ 30,975.00	7000.00	20.00	40.00	19.00	79.00	\$ 13,983.00			esmt	177		4425
R27	0E169	1E140	235	24	30	DIP	13.8	res back yrd	wooded	175.00	\$ 41,125.00	7000.00	40.00	40.00	19.00	99.00	\$ 23,265.00			esmt	235		5875
R27	0F018	0F137	8	18			9.9	res back yrd	clear	105.00	\$ 840.00	5000.00	0.00	0.00	38.00	38.00	\$ 304.00	new line		esmt	8		200
R27	0F135	0F136	306	24	30	RCP	10.4	res back yrd	creek/wooded	175.00	\$ 53,550.00	7000.00	40.00		19.00	59.00	\$ 18,054.00			esmt	306		7650
R27	0F136	0E080	320	24	30	RCP	9.3	res back yrd	creek/wooded	175.00	\$ 56,000.00	7000.00	40.00		19.00	59.00	\$ 18,880.00			esmt	320		8000
R27	0F137	0F135	220	24	30	RCP	11.6	res back yrd	creek/clear	175.00	\$ 38,500.00	7000.00	20.00		19.00	39.00	\$ 8,580.00			esmt	220		5500
R27	1E140	1E116	24	24	30	RCP	13.7	creek	wooded	175.00	\$ 4,200.00	5000.00	40.00	40.00	19.00	99.00	\$ 2,376.00			esmt	24		600
			2,221								\$ 388,115.00	\$ 66,000.00					\$ 148,111.00						
Total Raw Construction Cost Project R 27																	\$602,226						
R28	0B030	1B036	396	8	10	NRCP	7.8	park	wooded	85.00	\$ 33,660.00	3000.00	40.00	0.00	0.00	40.00	\$ 15,840.00			esmt	396		9900
			396								\$ 33,660.00	\$ 3,000.00					\$ 15,840.00						
Total Raw Construction Cost Project R 28																	\$52,500						
R29	16K005	16K022	200	18	48			Fourch Interc. FM	P. Valv Conn	235.00	\$ 47,000.00	20000.00	40.00	0.00	0.00	40.00	\$ 8,000.00			esmt	200		5000
			200								\$ 47,000.00	\$ 20,000.00					\$ 8,000.00						
Total Raw Construction Cost Project R 29																	\$75,000						
R30	7E 013	7E 016	158	12	15					95.00	\$ 15,010.00	20000.00	1.00	0.00	0.00	1.00	\$ 158.00						
			158								\$ 15,010.00	\$ 20,000.00					\$ 158.00						
Total Raw Construction Cost Project R 30																	\$35,168						
Sub-Totals											\$ 5,788,113	\$ 796,000					\$ 6,804,060						
Total (Required)																	\$ 13,388,173						
													SF	Unit cost									
													EASEMENTS	367,948	\$ 0.50			\$ 183,974					
													ROW	279,775	\$ 0.75			\$ 209,831					
													CONTINGENCY	15%				\$ 2,008,226					
													ENGINEERING DESIGN	12%				\$ 1,847,568					
TOTAL REQUIRED PROJECTS COST (Pipeline Improvements)																	\$ 17,637,772						

REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#1



Project R#1

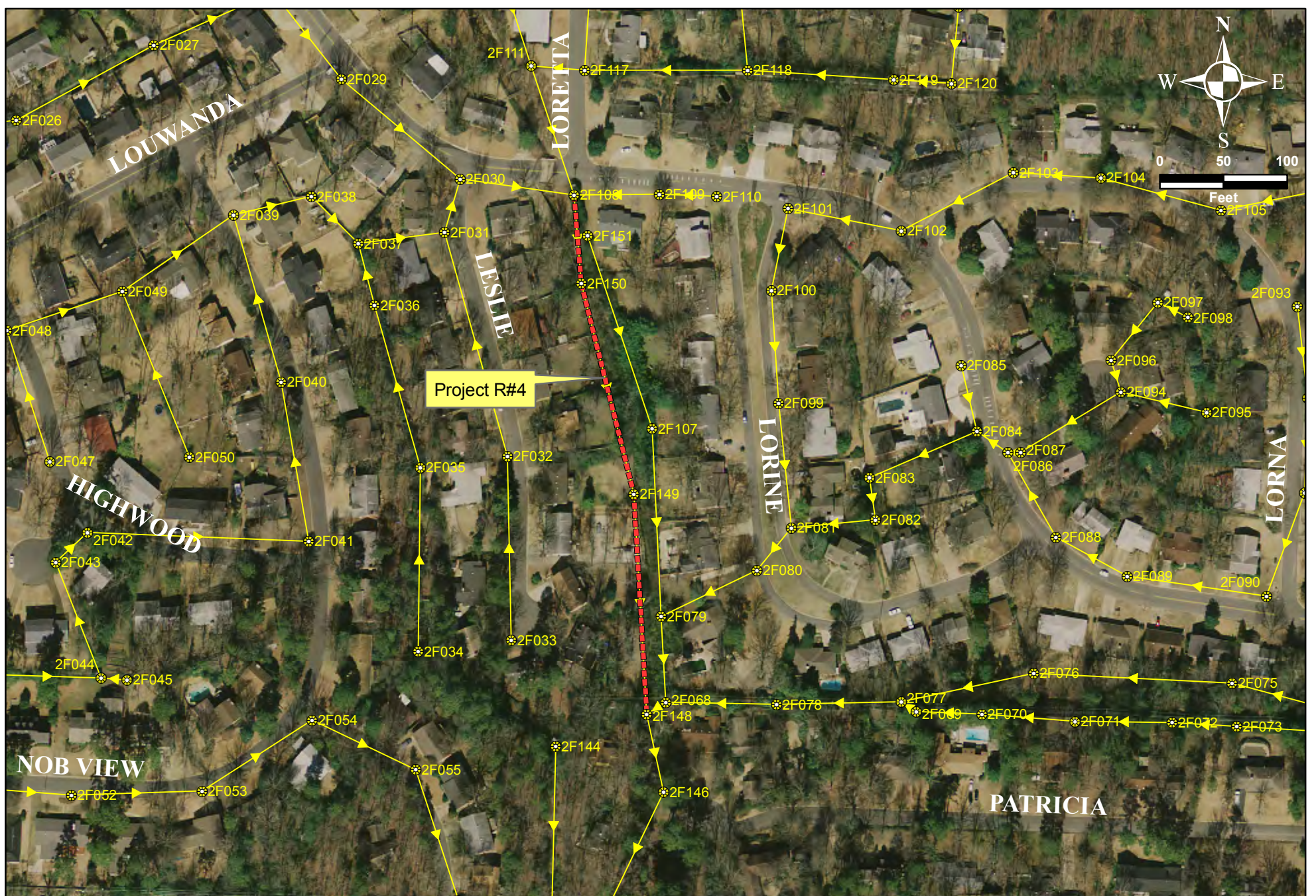
Legend

- REQUIRED PIPELINE IMPROVEMENTS
- GRAVITY MAINS
- - - FORCE MAINS
- MANHOLES

REQUIRED PIPELINE IMPROVEMENTS - PROJECTS R#2 AND R#3



REQUIRED PIPELINE IMPROVEMENTS - PROJECTS R#4 AND R#5



REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#6



REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#7



REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#8



Legend

- REQUIRED PIPELINE IMPROVEMENTS
- GRAVITY MAINS
- ⊗ MANHOLES

REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#9



Project R#9

Legend

- REQUIRED PIPELINE IMPROVEMENTS
- GRAVITY MAINS
- ⊗ MANHOLES

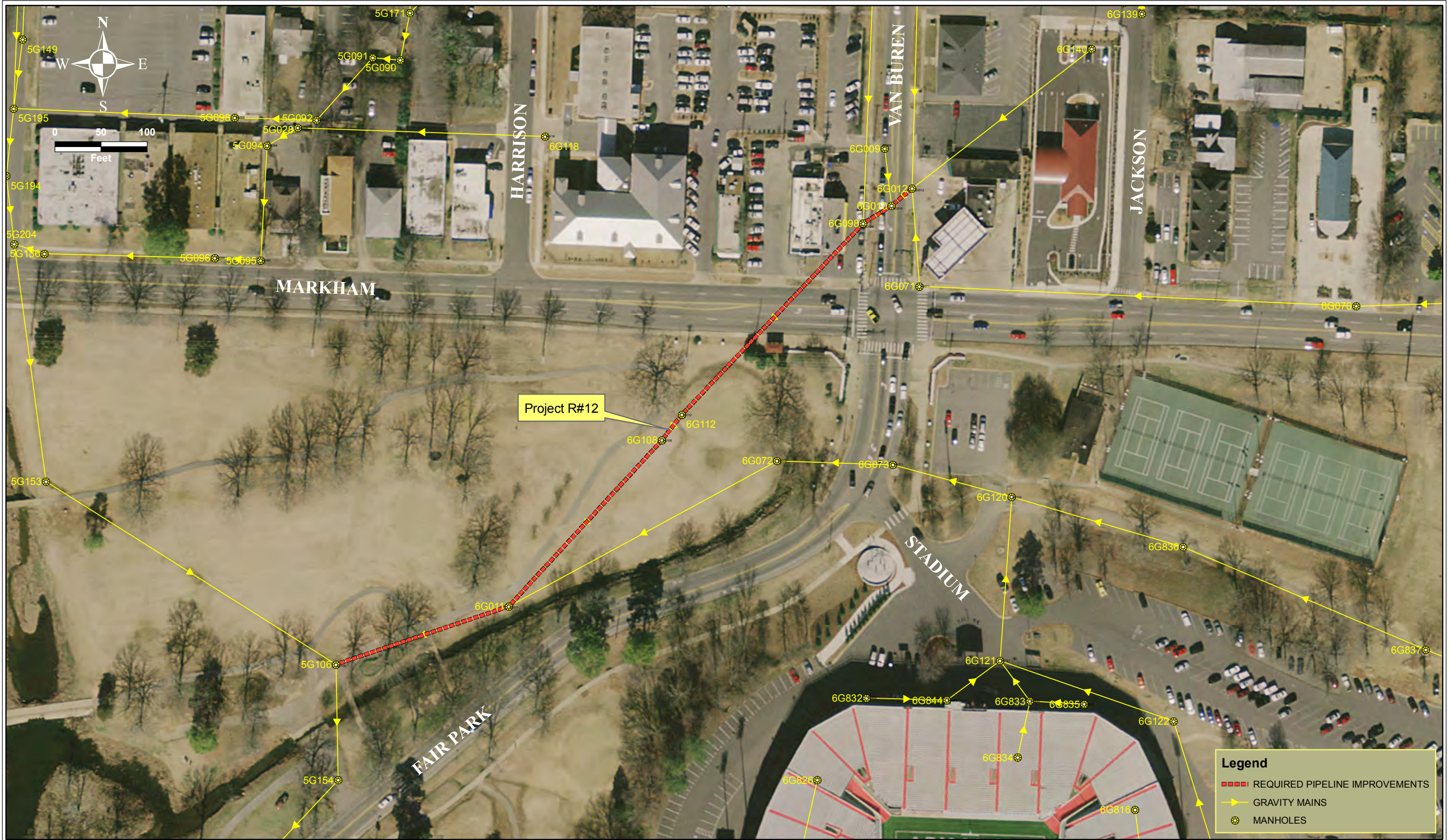
REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#11



Legend

- REQUIRED PIPELINE IMPROVEMENTS
- GRAVITY MAINS
- MANHOLES

REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#12



REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#13



Project R#13

Legend

- REQUIRED PIPELINE IMPROVEMENTS
- GRAVITY MAINS
- MANHOLES

REQUIRED PIPELINE IMPROVEMENTS - PROJECTS R#14 AND R#15



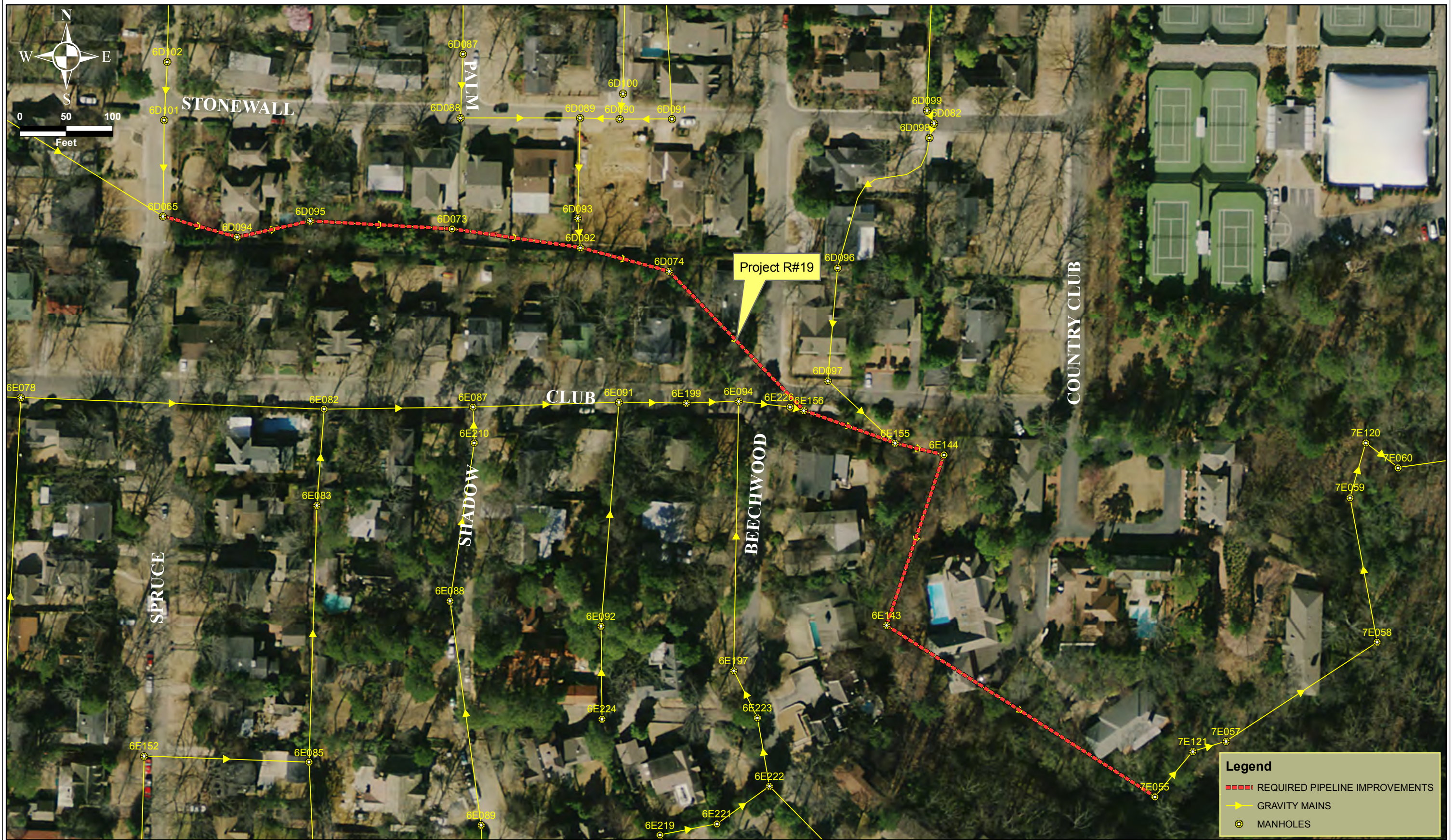
REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#16



Legend

- REQUIRED PIPELINE IMPROVEMENTS
- GRAVITY MAINS
- MANHOLES

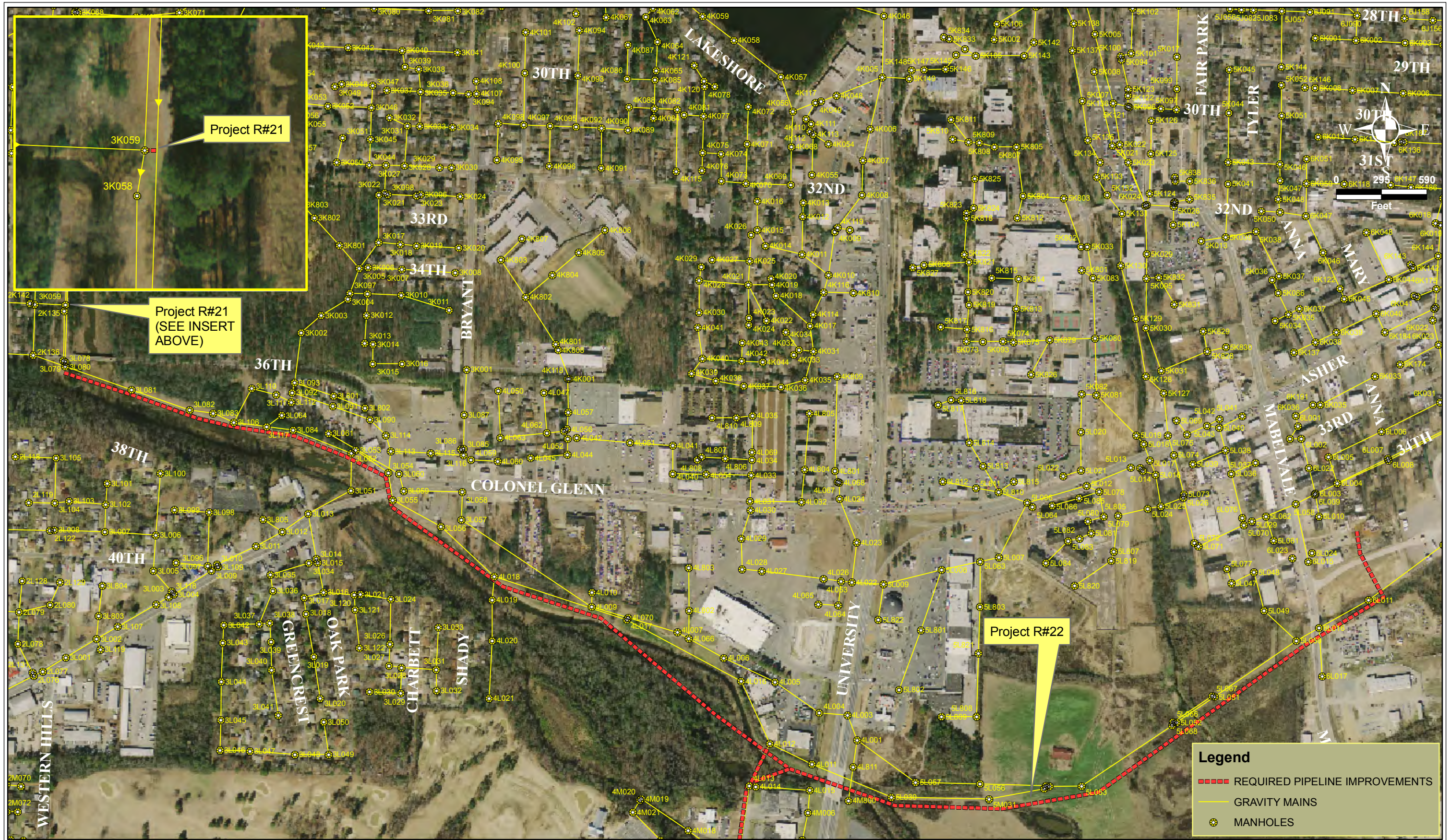
REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#19



REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#20



REQUIRED PIPELINE IMPROVEMENTS - PROJECTS R#21 AND R#22



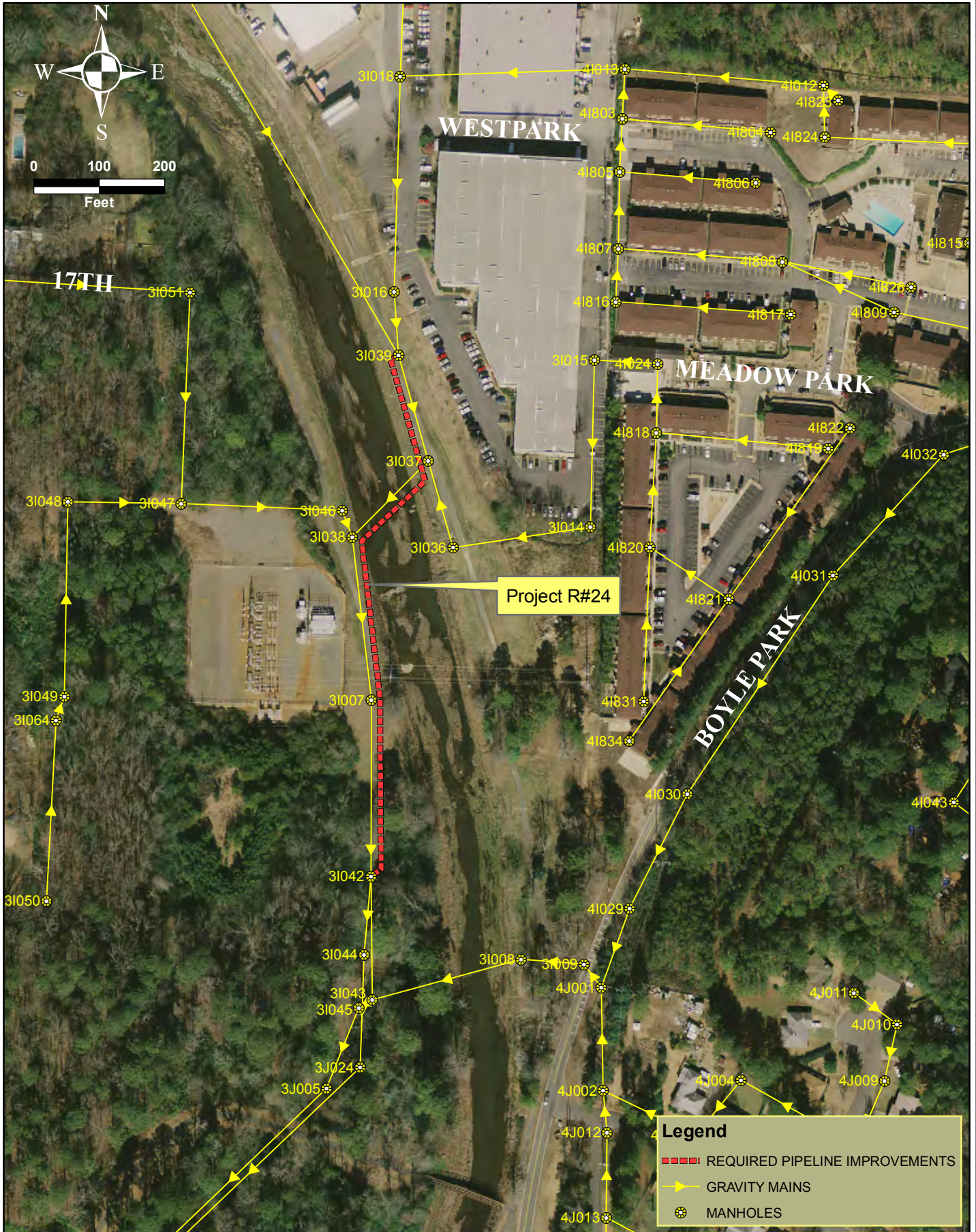
REQREQUIRED PIPELINE IMPROVEMENTS - PROJECT R#23



Legend

- - - REQUIRED PIPELINE IMPROVEMENTS
- ★ NEW & UPDATED MANHOLES
- GRAVITY MAINS
- ⊛ EXISTING MANHOLES

REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#24



Legend

- - - REQUIRED PIPELINE IMPROVEMENTS
- GRAVITY MAINS
- ⊗ MANHOLES

REQUIRED PIPELINE IMPROVEMENTS - PROJECTS R#25 AND R#26



REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#28



Legend

- - - REQUIRED PIPELINE IMPROVEMENTS
- GRAVITY MAINS
- ⊛ MANHOLES

REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#29



Legend

- REQUIRED PIPELINE IMPROVEMENTS
- - - FORCE MAINS
- GRAVITY MAINS
- MANHOLES

REQUIRED PIPELINE IMPROVEMENTS - PROJECT R#30

